

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB2004/002055

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 H01L33/00 H01L23/367

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 477 054 B1 (HAGERUP WILLIAM A) 5 November 2002 (2002-11-05)	1,5
Y	column 3, line 12 – column 4, line 48; figure 4	2-4, 6-11, 18-20 12-17
A	-----	
X	US 5 792 677 A (JAIRAZBHOY VIVEK AMIR ET AL) 11 August 1998 (1998-08-11)	1,5
Y	column 4, line 23 – column 9, line 5; figure 3b	2-4,20
A	-----	6-19
		-/-

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

\* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*&\* document member of the same patent family

Date of the actual completion of the International search

Date of mailing of the International search report

3 November 2004

11/11/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Krause, J

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB2004/002055

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 199 22 176 A (OSRAM OPTO SEMICONDUCTORS GMBH) 23 November 2000 (2000-11-23)	12
Y	column 2, line 15 – column 3, line 30; figure 1	6, 7, 13-17
A		1-5, 8-11, 18-20
X	US 2003/057534 A1 (HO TZONG-DA ET AL) 27 March 2003 (2003-03-27)	1
A	paragraph '0017! – paragraph '0030!; figures 1,3-5	2-20
X	GB 2 335 075 A (ERICSSON TELEFON AB L M) 8 September 1999 (1999-09-08)	1
A	page 2, line 8 – page 3, line 14; figure 1	2-20
Y	DE 81 14 325 U (SIEMENS AG) 11 November 1982 (1982-11-11)	8-11, 13-20
A	the whole document	1-7, 12
A	EP 1 139 019 A (RELUME CORP) 4 October 2001 (2001-10-04)	1-20
	paragraph '0011! – paragraph '0017!; figures 1-3	

**INTERNATIONAL SEARCH REPORT**

 International Application No  
 PCT/IB2004/002055

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 6477054	B1	05-11-2002	JP	2002118385 A		19-04-2002
US 5792677	A	11-08-1998		NONE		
DE 19922176	A	23-11-2000	DE	19922176 A1		23-11-2000
			WO	0069000 A1		16-11-2000
			EP	1177586 A1		06-02-2002
			JP	2002544673 T		24-12-2002
US 2003057534	A1	27-03-2003		NONE		
GB 2335075	A	08-09-1999		NONE		
DE 8114325	U	11-11-1982	DE	8114325 U1		11-11-1982
EP 1139019	A	04-10-2001	US	6428189 B1		06-08-2002
			CA	2342440 A1		30-09-2001
			EP	1139019 A1		04-10-2001